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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/427,675 10/27/99 JACQUINOT

E JACQUINOT=7

EXAMINER

001444 IM52/0705
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON DC 20001-5303

DEC. D
ART UNIT

PAPER NUMBER

1765
DATE MAILED:

11
07/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissloner of Patents and Trademarks

Office Action Summary

Application No.

09/427,675

Applicant(s)

JACQUINOT ET AL.

Examiner

DuyVu n Deo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to new claims 17-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacquinot et al. (US 6,043,159), Robinson et al. (US 5,733,176), and Bruxvoort et al. (US 5,958,794).

Jacquinot teaches a polishing an integrated circuit in which isolation layer, including silicon oxide and silicon nitride, is polished by an abrasive composition which comprises an aqueous acid suspension of individualized colloidal silica particles not linked to each other by siloxane bonds. The pH of the composition is about 1.5-4, the abrasives have diameters about 10-50 nm and a concentration of about 15-30% (col. 2, line 39-65; col. 4, line 1-10). Unlike claimed invention he doesn't describe that the abrasive is impregnated within a support.

Robinson teaches in the polishing process of insulating material including silicon oxide and silicon nitride, the abrasive can be either in the slurry or alternately in the pad (claimed support) (col. 1, line 15-45). Therefore, it would be obvious at the time of the invention for one skill in the art that using the abrasive in the slurry is equivalent as using the pad. Either way of using

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the abrasive would polish the insulating material with an anticipation of an expected result. The concentration, pH, and size of the abrasives would be the same as that of the abrasives in the slurry.

Unlike claimed invention, above prior art doesn't describe having a surfactant in the support. Bruxvoort teaches a method of forming fixed abrasive grinding media or fixed abrasive pad having abrasive such as silica wherein a surfactant is added to the fixed abrasive pad to modify the surface of the abrasive particles. The surfactant can be anionic or nonionic (col 20, line 15, 16, line 66-col. 21, line 5). It would have been obvious for one skill in the art at the time of the invention in light of Bruxvoort to add a surfactant because Bruxvoort teaches that these additive which includes a surfactant may improve the dispersibility of the particles in the binder precursor and/or improve the adhesion to the binder precursor and/or binder or to modify the surface of the abrasive particles (col. 20, line 15-19).

Bruxvoort teaches the concentration of the additives is from 0.5-10 w%. It would have been obvious at the time of the invention for one skill in the art through test runs to determine the optimum parameter of the process such as concentration of the surfactant, abrasive particles, pH in order to polish the layer with an anticipation of an expected result.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DuyVu n Deo whose telephone number is 703-305-0515.

DVD

July 2, 2001


BENJAMIN L. UTECH
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